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(54) Title: COMPOSITIONS AND METHODS FOR TREATMENT AND PROPHYLAXIS OF INFECTIONS CAUSED BY GRAM POSITIVE BACTERIA

(57) Abstract: The invention relates to methods of treatment, compositions and uses of an isolated and purified peptide for the inhibition of an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria. A specific peptide comprises an amino acid sequence substantially homologous to the amino acid sequence encoded by the SICR ORF of the sil locus at position 2985 to 2863 of the complementary strand of the genomic sequence of Group A Streptococcus (GAS) bacterium specified in GenBank accession number AF493605. Preferably, the peptide of the invention comprises an amino acid sequence DIFKLVIDIIISMKARKK, also denoted by SEQ ID NO: 32 or any functional fragment, analog or derivative thereof. The invention further relates to methods for inhibiting an invasive and/or non-invasive infection of Gram-positive pathogenic bacteria, using an agent such as the peptide of the invention, which induces down regulation and/or inhibition of chemokine protease activity.

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